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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,567	12/21/2001	Bill Engst	A8224	3671
7590 02/05/2004			EXAMINER	
SUGHRUE MION, PLLC 2100 Pennsylvania Avenue, NW Washington, DC 20037-3213			GLENN, KIMBERLY E	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 02/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/024,567

Applicant(s)

ENGST, BILL

Examiner

Kimberly E Glenn

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11/26/2003 6) ☐ Other: _____

DETAILED ACTION

The finality of last office action is withdrawn. The amendment after Final filed 1/9/2004 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4-9, 12-16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Niiranen et al US Patent 6,566,984 in view of Harrison US Patent 5,781,085. (Cited by applicant)

The primary reference Niiranen et al disclose in figure 1 a filter comprising a housing, a total of six coaxial resonators 110 120 130 140 150 160 each having a cavity and a cover 102 101. Two apertures 116, 117 are disposed in the partition wall between the first and the second resonator so that the said resonators are capacitively coupled through the said apertures. An aperture (not shown) is disposed in the partition wall between the third and the fourth resonator. There is also inductive coupling between the third and the fourth resonator. This is realized by means of conductive projections 134, 144 at the lower ends of the inner conductors 131, 141 and an aperture in the lower part of the partition wall 107. The capacitive coupler, which is disposed in the top portion of the partition wall, and the inductive coupler, which is disposed at the bottom of the partition wall, are disposed adjacent to each other.

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Thus, Niiranen is shown to teach all the limitation of the claim with the exceptions of a tuner for adjusting the inductance of the inductive coupler, the tuner includes an electrical conductor that extends into the opening of said cavity wall, the extent that said electrical conductor extends into the opening is adjustable and the electrical conductor being a screw threadedly engaged in the filter cover.

Harrison teaches a screw that includes an electrically conductive metal. The screw protrudes from and is threadedly engaged with a hole in wall 63 of the housing, and extends into an iris. Mutual inductive coupling occurs between the resonators via the screw 53. The inductive cross coupling between the resonators will be affect by adjusting the screw. By adjusting the screw 53, the opening between the resonators is adjusted. Therefore, the capacitive couple between the resonators is adjusted by adjusting the inductive couple means (screw 53).

One of ordinary skill in the art at the time of the invention would have found to obvious to have replaced the inductive coupling means of Niiranen et al with the art recognized equivalent inductive coupling means taught by Harrison. The motivation for this modification would have been to provide an alternate yet equivalent inductive coupling means.

Claims 3,10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Niiranen et al in view of Harrison as applied to claims 2, 9 respectively above, and further in view of Fiedziuszko US Patent 4,453,146 (of record).

Thus, Niiranen et al and Harrison are shown to teach all the limitations of the claimed invention with the exceptions the capacitive coupler includes a bar that extends from said cavity wall into each of said first and second cavities and said bar is provided in an insulating collar which is removably fixed to said cavity wall. See above rejection.

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Fiedziusko disclose a probe 22 (bar) which is insulated from the electrically conductive cavity 12 walls 40 by means of a cylindrical dielectric sleeve 24 surrounding probe 22 and fitting into cylindrical notch 34 cut into housing 28.

One of ordinary skill in the art at the time of the invention would have found to obvious to replace the capacitive coupling means, apertures 116 117 of Niiranen et al with the art recognized equivalent capacitive coupling means, the probe (bar) and the dielectric sleeve 24, as taught by Fiedziusko. The motivation for this modification would have been to provide an alternate yet equivalent capacitive coupling means.

Response to Arguments

Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly E Glenn whose telephone number is (571) 272-1761. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571) 272-1769. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

keg

Kimberly E Glenn
Examiner
Art Unit 2817



**BENNY T. LEE
PRIMARY EXAMINER
ART UNIT 2817**